

METHOD AND SYSTEM FOR WIRELESS COMMUNICATIONS USING
DIFFERENT MODULATION TECHNIQUES TO PROVIDE GUARD
TIMES

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Abstract of the Disclosure

A method and system for wireless communications between a base transceiver station and a mobile unit which provides necessary guard times in the downlink signal burst while maintaining the same bit rate in both the downlink and uplink signal bursts is disclosed. Downlink signal bursts are modulated using a first modulation technique and uplink signal bursts are modulated using a second modulation technique. Preferably, the first modulation technique is a higher-order than the second modulation technique. The first modulation technique may be 16 QAM while the second modulation technique may be 4 QAM or $\pi/4$ QPSK.

DRAFT - DRAFT